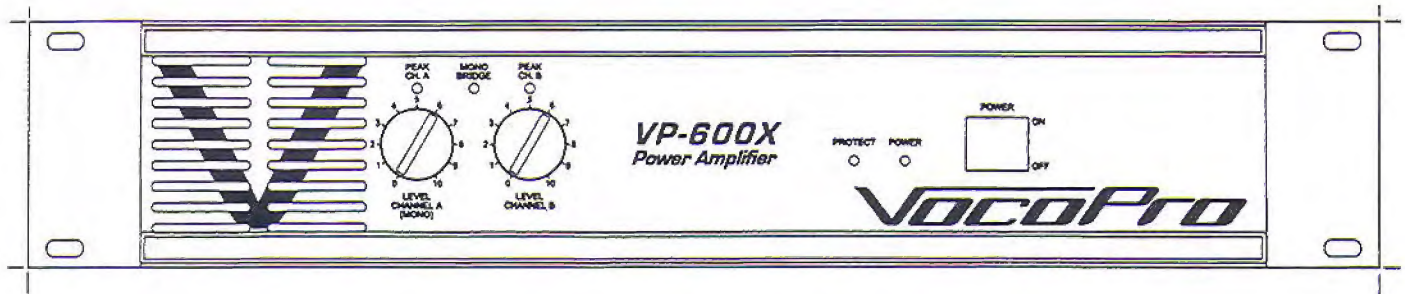


VocoPro OWNER'S MANUAL



VP-600X **PROFESSIONAL POWER** **AMPLIFIER**

EXCELLENT FEATURES:

- 300 WATTS + 300 WATTS RMS OUTPUT AT 4 OHMS
600 WATTS RMS OUTPUT AT MONO/BRIDGE MODE
- SIGNAL TO NOISE RATIO : 100 dB
- FAN COOLED WITH 5 WAY PROTECTION
- BOTH 1/4" JACK INPUTS 8 XLR JACK INPUTS
- **A HEAVY DUTY COMMERCIAL WORK HORSE**

| |
|--|
| CAUTION: |
| RISK OF ELECTRIC SHOCK DO NOT OPEN |
| CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK) NO USER-SERVICABLE PARTS INSIDE REFER SERVICING TO QUALIFIED SERVICE PERSONNEL |



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING

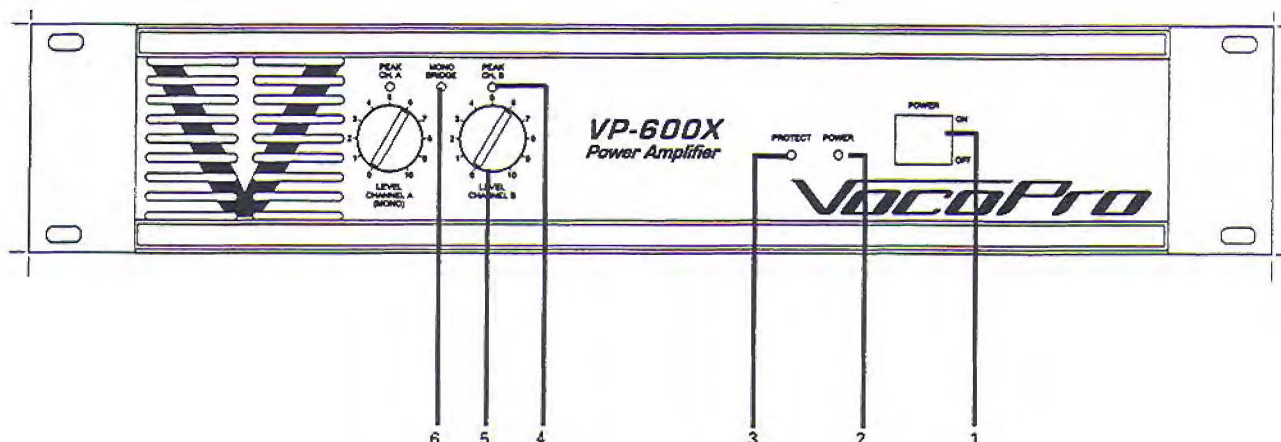
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CAUTION:

TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD. RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

NAMES OF PARTS AND THEIR FUNCTIONS

Front panel



1. Power On/Off Switch

2. Power Indicator led

3. Protect indicator LED

If protect conditions should occur, such as a short in a speaker cable or connector or excessively high operating temperatures, this LED will light and the amplifier will stop operation until the protect condition is corrected.

The protect LED indicates that there is a problem either in the amplifier's external connections, load or temperature conditions or its internal functions. If one of these situations occurs, the amplifier senses the problem and automatically switches into its "protect mode." The LED will light to warn you of the trouble and the amplifier will stop working. If this happens, switch off the amplifier and refer to the Trouble Shooting Guide at the end of this manual. If you feel that you have been able to correct the fault condition that caused the amplifier to go into the protect mode, restart the amplifier. If the protect LED remains lit when attempting to resume amplifier operation, do not use the amplifier. Refer the amplifier to an authorized service facility or contact your dealer for help.

4. Peak/ Clip Ind.

A clip LED for each channel indicates that your signal level is so strong that there is distortion at the output of that channel. While it is normal for the clip LED to flash during program peaks, the LED should not remain constantly lit during operation. If it does, most likely you will hear the results in the form of distorted sound that can be damaging to your speaker systems. In this case, reduce the

signal level by lowering the input level control for the channel that is clipping or reduce the level at the source. Note that when using the amplifier in the mono/bridge mode, both clip LEDs of the bridged channels will operate simultaneously.

5. Input Level Attenuator

Establish the required input level for each channel. In the mono/Bridge mode, only the channel A attenuator is functional.

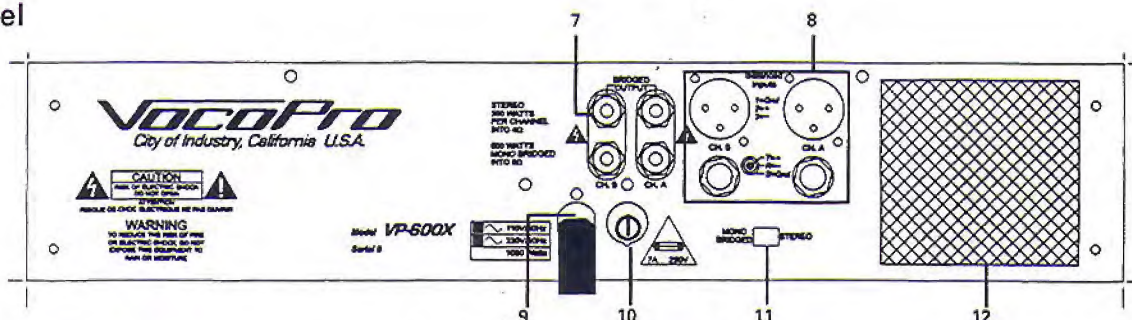
With all level controls set to 0, switch power on. Apply a nominal signal to the inputs. The level of the input signal should be about as high as you will ever need it to be. This way, it will be as far above the amplifier's noise floor as possible, ensuring an excellent performance signal to noise ratio. Adjust the input level controls for channel A on to achieve the desired maximum listening level or until the clip LEDs flash momentarily during program peaks, which ever is lowest. Having set the levels in this manner will render a clean signal at any level as long as the clip LEDs are not constantly on. Remember, when the clip LEDs light, there is distortion present in the amplifier's output section.

6. Mono/ Bridge Mode Indicator LED

Shows when channels A & B are in the mono /bridge mode.

The mono/bridge LED for each channel will light when you have set the rear panel switch(es) to the mono/bridge position for bridged operation. Always make sure that this switch is in the correct position and that all speaker connections have been made correctly for the mode of operation you wish to use before powering up the amplifier.

Rear Panel



7. Speaker Connections

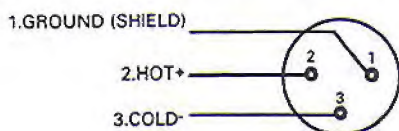
The total speaker load for each channel must be at least 4 ohms or above for stereo mode. 8 ohms or above for mono/Bridge mode. If you try to operate at less than 8 ohms in the mono/bridge mode, the amplifier will go into the protect mode and stop operation until you correct the load conditions.

Speaker connections are dual banana MDP/bare wire binding posts that will accept a standard dual banana plug or bare wire. Either method provides a safe and reliable connection capable of transferring high power signals if properly connected. To avoid ANY possible shock hazard, the power amplifier should be disconnected from the AC power source before making any connections. When connecting your speakers using either method, be sure to pay close attention to proper polarity. Although connecting your speaker systems out of phase using the wrong polarity will not damage your speakers, it will affect the quality of sound. When using bare wire connections, be sure that your connections are "Clean". If any strands of wire from one connector are allowed to touch the adjacent connector, damage to your amplifier and sound system could occur.

8. Input Connections

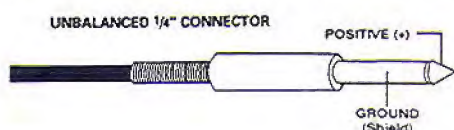
1. XLR Input Jacks

Low impedance, balanced inputs accept a standard XLR male connector. Pin 1 = ground, pin 2 = hot or positive (+) and pin 3 = cold or negative (-).



2. 1/4 Inch Inputs

Accept an unbalanced line level signal. The unbalanced line uses a normal tip/sleeve connection. The tip is positive and the sleeve is negative /ground.



9. Power Cord

10. Fuse

Replace **ONLY** with correct type and rating as indicated on the rear panel of the amplifier.

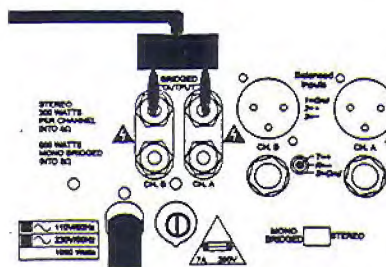
Before your amplifier is shipped from the factory, the switch is set to 120 V. If you move to an area where the voltage requirements differ, set under the responsibility of the user according to the local power voltage. Be sure to replace the fuse with the specified after changing the voltage setting. 120Vac : 13 A 230Vac : 7 A

11. Mono/Bridge Mode Switch

Bridges inputs and outputs in pairs of channels as indicated.

Set the switch(es) on the rear panel for channel(s) you wish to operate in the mono/bridge mode to the mono/bridge position. When the power is on, the mono/bridge LED(s) on the front panel will light. If the LED(s) does (do) not illuminate, you have the mono/bridge switch(es) in the wrong position. Change the appropriate switch before continuing.

Be sure to have the speaker output connect to the mono/bridge position correctly when using the mono/bridge mode.



Warning: Do not hook up more than one speaker unless the speaker's impedance is 16 Ohms or more.

12. Cooling Air Port

To avoid possible heat related damage to the amplifier. Do not block this opening.

OPERATION

A. MOUNTING

VP-600X are designed for standard 19 inch rack mounting. In addition, the amplifiers are provided with sturdy no-skid rubber feet for secure table top or stacked operation. When rack mounting one or more amplifiers or when mounting in combination with other equipment, be sure to allow adequate front and rear ventilation to avoid possible heat related damage to your amplifier or other rack mounted items.

B. OPERATING PRECAUTIONS

Your VocoPro VP-600X power amplifier is will protected from any external faults. However, we recommend following these common-sense precautions:

1. Safety Instructions

Read and follow all of the safety warnings on page 2 of this manual and on the separate safety precautions page enclosed with the unit. Do not expose the VP-600X to water or other liquids. Always unplug the unit if water is present. Failure to do so can result in injury or death from electric shock.

2. Grounding

If your power amplifier is supplied with a three-conductor, grounded power cord and plug, connect the unit only to a properly grounded mains outlet. Do not use a ground lift adapter or otherwise attempt to defeat the ground on the plug. Failure to properly ground the unit can result in damage to the amplifier or other equipment connected to it and represents a dangerous safety hazard.

3. Line Voltage

Operate from AC mains not more than 5% above or below the specified line voltage. Failure to comply may invalidate your warranty.

4. Pre-Connection Caution

Always switch off the power and set all the level controls

to minimum before making any connections. This will eliminate any chance of unexpected, loud audio transients that could damage your speaker systems.

5. Set Mono/Bridge Switch(es)

Set the mono/bridge switch(es) on the rear panel to the stereo position. When the power is on the mono/bridge LED(s) on the front panel will not light. If the LED(s) illuminate, you have the switch(es) in the wrong position. Change the appropriate switch before continuing.

6. Input Connections

With the power off, connect your input source lines to channels 1 and 2 on the VP-600X.

7. Connect Speaker Systems

Connect speaker systems to speaker outputs as shown in installations. The total speaker load for each channel must be at least 4 ohms. The amplifier will not operate at load conditions lower than 4 ohms per channel.

8. Level Controls

With all level controls set to 0, switch the power on. Apply a nominal signal to the inputs. The level of the input signal should be about as high as you will ever need it to be. This way, it will be as far above the amplifier's noise floor as possible, ensuring an excellent performance signal to noise ratio. Adjust the input level controls for each channel to achieve the desired maximum listening level or until the clip LEDs flash momentarily during program peaks, which ever is lowest. Having set the levels in this manner will render a clean signal at any level as long as the clip LEDs are not constantly on. Remember, when the clip LEDs light, there is distortion present in the amplifier's output section.

C. MONO/BRIDGE OPERATION

This method of operation bridges inputs and outputs and can be used with 8 ohm or higher applications only. Bridging the VP-600X converts the amplifier to a mono or single channel amplifier providing 600 watts into a single 8 ohm load.

SPECIFICATION

Power Output : 300 watts + 300 watts (Rms)
at 4Ω
600 watts mono/bridge at 8Ω
Frequency Response : 20 kHz-20 kHz
THD : .05%
Crosstalk : - 70 dB
Input Sensitivity : +4 dB (1.23v)
Limiter Range : +12 dB (Max THD 3%)
Protection : Short circuit, current limited, thermal

cutoff, DC protection for speaker outputs
power up/down transients AC line fuse
Signal To Noise Ratio : 100 dB
Cooling : Single fan forced air
Weight : 35 lbs /16 kg
Fuse Type/Rating : 120Vac:13A
230Vac:7A
Dimensions : 19" x 16" x 3 1/2"
483mm x 407mm x 89mm

TROUBLESHOOTING

INCORRECT OPERATIONS ARE OFTEN MISTAKEN FOR TROUBLE AND MALFUNCTIONS. IF YOU THINK THERE IS SOMETHING WRONG WITH THIS COMPONENT, CHECK THE POINTS BELOW. SOMETIMES THE TROUBLE MAY LIE IN ANOTHER COMPONENT. INVESTIGATE THE OTHER COMPONENTS AND ELECTRICAL APPLIANCES BEING USED. IF THE TROUBLE CANNOT BE RECTIFIED EVEN AFTER EXERCISING THE CHECKS LISTED BELOW, ASK YOUR AUTHORIZED SERVICE CENTER OR YOUR DEALER TO CARRY OUT THE REPAIR WORK.

| SYMPTOM | CAUSE | REMEDY |
|--|---|---|
| NO SOUND | <ul style="list-style-type: none"> • POWER CARD IS UNPLUGGED • AMP IS NOT TURN ON • INPUT SOURCE NOT ON OR SWITCHED INCORRECTLY | <ul style="list-style-type: none"> • CONNECT THE POWERCORD • TURN ON THE AMP • SET TO THE CORRECT INPUT AND MAKE SURE THE DESIRE INPUT EQUIPMENT IS BEEN PLAY |
| SOUND IS DISTORTED. | <ul style="list-style-type: none"> • DISTORTION OCCURRING IN SOURCE DEVICE. • INPUT LEVEL IS SET TOO HIGH. | <ul style="list-style-type: none"> • CHECK CLIP INDICATORS ON INPUT SOURCE DEVICES AND RESET LEVELS WHERE NECESSARY TO ELIMINATE DISTORTION. • ADJUST AMPLIFIER LEVEL CONTROLS. |
| PROTECT LED REMAINS LIT AFTER USING AMPLIFIER FOR A SHORT TIME. | <ul style="list-style-type: none"> • UNIT IS OPERATING AT EXCESSIVELY HIGH TEMPERATURE • EXTREME LOW SPEAKER IMPEDANCE. • SHORT IN SPEAKER CONNECTOR, SPEAKER CABLE OR SPEAKER SYSTEM. | <ul style="list-style-type: none"> • CHECK THAT AMPLIFIER IS ADEQUATELY VENTILATED ON THE FRONT AND REAR PANELS WHERE THE AIR VENTS AND FANS ARE LOCATED. • CHECK POSITION OF MONO/BRIDGE SWITCH(ES). BE SURE THAT SPEAKER CONNECTIONS ARE MADE IN ACCORDANCE WITH THE SWITCH SETTING. • VERIFY SPEAKER SYSTEM IMPEDANCE. BE SURE THAT THE TOTAL SPEAKER SYSTEM IMPEDANCE IS AT LEAST 4 OHMS WHEN THE MONO/BRIDGE MODE SWITCH IS IN THE STEREO POSITION. IF THE SWITCH IS IN THE BRIDGE MODE, THE IMPEDANCE MUST BE AT LEAST 8 OHMS. IF YOU ARE NOT SURE OF YOUR TOTAL SPEAKER IMPEDANCE LOAD, CONTACT YOUR DEALER FOR MORE INFORMATION. • CHECK CONDITION AND SIZE OF SPEAKER CABLES. HIGH POWER APPLICATIONS REQUIRE HEAVY GAUGE SPEAKER CABLES WITH HIGH QUALITY CONNECTOR. • IF USING BARE WIRE CONNECTIONS AT THE AMPLIFIER, BE SURE THAT NO STRANDS FROM ONE CONNECTOR ARE TOUCHING ANY OTHER CONNECTOR. |
| PROTECT LED FLASHES DURING PROGRAM PEAKS; AMPLIFIER CUTS OUT INTERMITTENTLY. | SPEAKER LOAD IMPEDANCE IS TOO LOW. | <ul style="list-style-type: none"> • CHECK POSITION OF MONO/BRIDGE SWITCH(ES). • VERIFY SPEAKER SYSTEM IMPEDANCE. • CHECK CONDITION OF SPEAKER CABLES AND CONNECTION. |
| CHANNEL 2 INPUT DOESN'T WORK. | AMPLIFIER IS IN THE MONO/BRIDGE MODE. | CHECK POSITION OF MONO/BRIDGE SWITCH(ES). |

IMPORTANT SAFEGUARDS

Please read all of the safety and operating instructions before operating this unit. For best result, follow all warnings placed on the unit and adhere to the operating and use instructions. THESE safety and operating instructions should be retained for future reference.

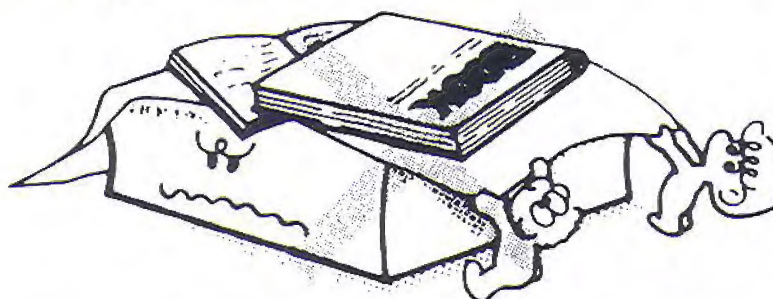
1. **Power source** — The unit should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
2. **Power-cord protection** — Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, pay particular attention to cords at plugs, convenience receptacles, and the point where they exit from the unit.

Never pull or stretch the cord

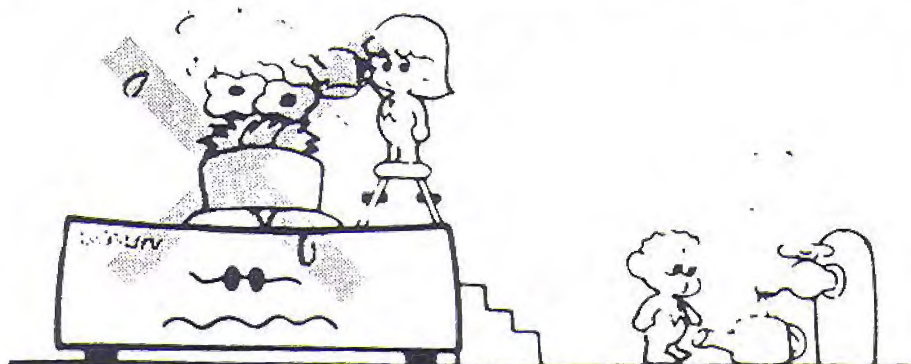


3. **Ventilation** — The unit should be situated so that its location or position does not interfere with its proper ventilation.

To maintain good ventilation, do not put records or a table-cloth on the unit. Place the unit at least 10 cm away from the walls.

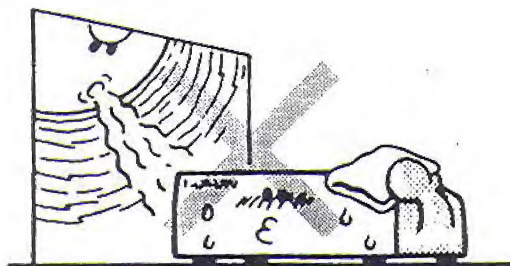


4. **Water and moisture** — The unit should not be used near water — for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.

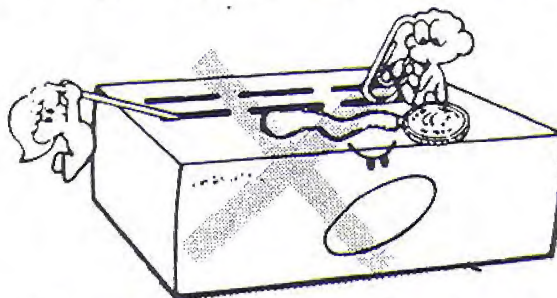


5. **Temperature** — The unit may not function properly if used at extremely low, or freezing temperatures. The ideal ambient temperature is above +5°C (41°F).

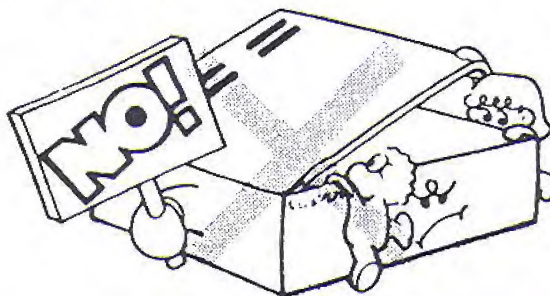
6. **Heat** — The unit should be situated away from heat sources such as radiators, heat registers, stoves, or other units (including amplifiers) that produce heat.



7. **Electric shock** — If a metal object, such as a hair pin or a needle, comes into contact with the inside of this unit, a dangerous electric shock may result. For families with children, never permit children to put anything, especially metal, inside this unit.



8. **Enclosure removal** — Never remove the enclosure. If the internal parts are touched accidentally, a serious electric shock might occur.



9. **Cleaning** — Do not use volatile solvents such as alcohol, paint thinner, gasoline, or benzine, etc. to clean the cabinet. Use a clean dry cloth.



10. **Abnormal smell** — If an abnormal smell

POWER OFF!